Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Improving Competitive Broadband Access	)	GN Docket No. 17-142
To Multiple Tenant Environments	)	
	)	
To: Office of the Secretary	)	
	)	

REPLY COMMENTS OF ELAUWIT NETWORKS

I. EXECUTIVE SUMMARY

Elauwit Networks, LLC ("Elauwit") is a competitive service provider in multi-tenant environments (MTEs). Any MTE market that does not include competitive service providers like Elauwit will be dominated by only a few large cable and telecommunications providers that collectively have a clear historical record of suppressing competition whenever consumer choice threatens their monopolistic business model. Elauwit and similarly situated broadband providers *are* the competition.

The policy proposals discussed in this Notice of Inquiry ("NOI") proceeding include proposals that would either expressly or by implication preclude service providers from offering bulk broadband services at MTE properties. However, bulk service is not only *essential* to the continuing viability of competitive broadband service providers like Elauwit, but is also by far the most economically and socially efficient model for delivering advanced services to residents of MTE properties, including those residents who are most vulnerable to the predatory strategies and practices of incumbent cable and telco carriers. A bulk service arrangement is the *only* service-delivery structure to encourage and incentivize MTE owners to invest in and own the type of broadband infrastructure that is required to deliver advanced services and applications to consumers in MTEs at affordable prices, and which often exceeds the capabilities of wired and wireless infrastructure provided to customers living in single-family homes. Without the ability to deliver MTE services in bulk, competitive broadband service providers will exit the market, in-building infrastructure will once again be owned by and leveraged to the advantage of incumbent cable and telco carriers, and consumers residing in MTE properties will be at the mercy of a small number of carriers with no incentive to compete, no incentive to offer affordable pricing, no incentive to offer contractually enforceable customer service guarantees and no incentive to upgrade broadband infrastructure.

II. INTRODUCTION

This Notice of Inquiry seeks comment on "ways to facilitate greater consumer choice and enhance broadband deployment in multiple tenant environments (MTEs)."[1] All parties recognize that competition is the key to facilitating greater consumer choice and increasing incentives for broadband deployment in MTEs. However, there is disagreement among the commenters over how competition may best be enhanced, and in particular on the question of whether regulatory intervention at the local, state or Federal level is the best way to enhance competition among providers of broadband communications services to MTE residents.

When the Commission refers to "competitive broadband service providers" in the MTE space (as in NOI, ¶ 8), it is referring to companies like Elauwit. Elauwit was formed in 2009 in Charleston, S.C. and is a technology integrator that provides bulk Internet and video services to residential multi-tenant properties in direct competition with larger, well-funded entities. Elauwit currently provides these services to a total of 192 MTE properties in 40 states, serving a total of 115,000 beds. Elauwit's services are highly innovative and competitive, offering customers wired and wireless Internet connectivity with up to 10 Gigabit speeds to a property and up to 1 Gbps to end-user devices. Elauwit's technology delivers not only video and broadband services to consumer devices, but also a reliable, robust and integrated on-property network that connects an array of intelligent-building devices such as smart thermostats, access controls, security cameras and sensor networks which detect water and electricity flows, alerting MTE owners and residents of irregularities in real time. In addition, Elauwit offers competitive linear and non-linear video services delivered *via* private closed radio frequency (RF), Internet Protocol (IP) networks and over-the-top (OTT) through a variety of competitive backbone providers, and 90 percent of Elauwit subscribers receive 802.11AC dual band enterprise-grade managed WiFi service.

[1] In these Comments, we use the term "MTE" as the Commission does in the NOI, referring to commercial or residential premises such as apartment buildings, condominium buildings, shopping malls or cooperatives that are occupied by multiple entities, including but not limited to "multiple dwelling-unit" or "MDU" buildings. *See* NOI, at para. 2, footnote 3.

Of the 192 MTE properties currently served by Elauwit, 90 percent are student housing facilities, 3.3 percent are condominiums, 3.3 percent conventional multi-family dwellings and 3.3 percent hospitality properties. Elauwit's preferred business model involves the provision of bulk Internet and video services over in-building wiring infrastructure that is either installed by Elauwit and sold to the MTE owner or existing wiring is designated for Elauwit's uninterrupted use. Elauwit places fiber optic cable from the street to the IDF locations in an MTE building, and uses either fiber optic, coaxial, or CAT5e (or better) home run wires to carry the signal to each unit. In addition, at every location where video services are provided, Elauwit installs a rooftop master antenna system that is owned by the MTE and used to deliver broadcast television programming *via* coaxial cable to each unit at no charge to the resident.

Elauwit strongly believes that all parties involved – the consumer, the MTE owner and the service provider – benefit when in-building broadband infrastructure is owned by the property owner rather than by the service provider, for several reasons. First, it is the cost savings realized in allocating ownership of the physical network to the MTE owner that allows the MTE owner through Elauwit to deliver state-of-the-art broadband services to MTE residents at a steep discount. Second, when the MTE owner owns in-building infrastructure, the owner has greater operational and legal control over the real property asset, and that means that service providers are less able to leverage malicious building-access schemes (such as easements) for anticompetitive purposes – for example, when the provider's service contract expires, or when the property changes hands. To the extent that the physical network is considered part of the real estate, the MTE is not burdened by easements and similar encumbrances that spark disputes over what happens to the network infrastructure when the property is conveyed to a third party.

One-hundred percent of Elauwit's customers receive Internet and/or video services under a bulk billing and service arrangement ("Bulk Arrangement"). Although any customer is free to order upgraded video or Internet services above and beyond the bulk package, Elauwit does not enter into non-bulk access agreements. For this reason, Elauwit does not need, demand, offer or participate in building-access schemes such as long-term or perpetual easements, exclusive marketing deals, revenue-sharing

arrangements or door-fee enticements. Under the typical Elauwit Bulk Arrangement, each and every unit and occupant at the MTE receives Internet service at 50 Mbps or greater, and optionally up to 96 linear video channels with unlimited OTT video options over a relatively short term which is subject to renegotiation every three to five years. Elauwit's typical bulk rate for these services is $7 to $15 for Internet, $15 to $25 per unit per month for video, with no monthly charge for broadcast locals. At these prices, consumers enjoy high-quality services at monthly rates that are between 60 to 80 percent less than the retail rates offered by Elauwit's competitors, depending on region. These low rates are possible because Elauwit is not required to spend money on marketing, selling, installing and disconnecting individual subscription services on a unit-by-unit basis, and the savings realized under Elauwit's model allow the company to offer strict and legally enforceable customer service commitments (SLAs) to the MTE owner as part of its standard bulk agreement. It should be noted that Elauwit's incumbent cable and telco competitors – including Google Fiber – do *not* typically agree to enforceable SLAs.

Elauwit and companies like Elauwit can be described as "competitive service providers" not simply because they actually compete in the marketplace for MTE customers, but because without the active presence of independent entrepreneurial companies like Elauwit, MTE markets would be *entirely dominated* by a small number of enormous, monolithic incumbent cable operators and telephone companies which collectively have a long history of predatory monopolistic behavior. In other words, *companies like Elauwit are the competition.* It follows that if Elauwit and similar service providers are forced out of any market, that market will not be competitive *regardless* of the specific rules governing access to MTE buildings.

Our use of the term "competitive broadband provider" in these Comments is intended to bring out an important general point that needs to be emphasized because it is easily lost in the discussion of the particular reform proposals being discussed in this proceeding. The point is this: the specific reform proposals outlined in the NOI are intended to prohibit certain contractual practices that allegedly suppress competitive entry into a specific MTE property. *The common assumption underlying the reform*

initiatives discussed in the NOI is that the relevant market for evaluating broadband competition is the isolated MTE property. Viewed from the perspective of a single MTE property, the key to competition seems clear: simply provide every service provider with a legal right of equal and direct access to customers residing within the MTE without interference by the property owner. But this perspective is unrealistic and therefore deceptive.

The inescapable fact remains that every particular MTE property exists within a regional market, and the decision of a service provider regarding whether or not to build out, and commit local resources to the provision of reliable technical support to a broadband network, is made on a regional basis. To the extent that rules governing MTE access agreements effectively deter competitive broadband providers from entering a regional market for the purpose of competing with incumbent providers, the rules will have failed to achieve their intended purpose. *That* is the fundamental flaw in the approach outlined in the NOI and advocated by proponents of reform such as INCOMPAS. If the policy reforms being proposed are implemented in Region A (*e.g.*, the City of San Francisco), the effect will be that competitive broadband providers will abandon or refuse to enter Region A. To the extent that happens, then there will be fewer competitive broadband options available to residents of MTEs located within Region A, *regardless* of the rules governing access to particular MTE buildings. If the proposed policy reforms are implemented nationwide, the effect will be that competitive broadband providers will simply cease to exist, and MTE residents from coast to coast will be left to the tender mercies of a few entrenched conglomerates which, as history proves, have no interest in competing at all. The purpose of these Comments is to explain why the above proposition is true. Our focus is on the crucial importance of Bulk Arrangements in a competitive MTE market for broadband services, and on what is required in order for Bulk Arrangements to remain a viable and efficient model for delivering broadband services to consumers.

III. BULK BILLING ARRANGEMENTS AND EXCLUSIVE WIRING-ACCESS AGREEMENTS.

A. Bulk Arrangements must be preserved in order for competitive broadband service providers to survive.

The Commission has described bulk video service as "an arrangement in which one MVPD provides video service to every resident of an MDU, usually at a significant discount from the retail rate that each resident would pay if he or she contracted with the MVPD individually."[2] The owner of the MTE (including in the case of a condominium or other common interest property, the homeowners' association or "HOA") is invoiced by and pays a monthly bulk service fee to the bulk service provider, and the owner in turn indirectly recovers the cost of the bulk service from residents on a *pro rata* basis in the form of rent or HOA fees or dues. Although bulk service arrangements are used in all types of MTE communities, they are the rule rather than the exception in certain types of residential facilities – specifically, student housing, senior living facilities and government assisted housing, as well as condominium and other common-interest communities. The reasons for using Bulk Arrangements in these types of communities are clear. People residing in senior and subsidized housing facilities typically live on fixed incomes with little cash left over each month for discretionary spending. A bulk billing arrangement addresses the issue of ever-rising cable and broadband prices because bulk customers receive services at a monthly rate that is at least 50 percent less than what a single-family home would pay for the same services – *and* consumers are protected from arbitrary price increases by negotiated caps on bulk fee escalation. Most college students also live on a limited budget, and in addition are unable to commit to the typical 24- or 12-month subscription agreement required for retail services. Finally, residents of a common-interest community such as a condominium or co-op building are represented by an owners' association and its

[2] *Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments*, MB Docket No. 07-51, Second Report and Order, 25 FCC Rcd 2460, 2462, para. 3 (2010) (*2010 Exclusive Service Contracts Order).*

board of directors, and clearly benefit from their collective bargaining power in negotiating for the best cable and broadband services at discounted rates available under a bulk billing arrangement.

The Commission has in the past acknowledged the policy benefits of bulk billing arrangements for multi-channel video programming services. In the *2010 Exclusive Service Contracts Order*, it was noted that "the benefits to consumers of bulk billing arrangements outweigh their harms...In the large majority of cases, bulk billing appears to lower prices, increase the volume and variety of programming, encourage high quality and innovation, and bring video, voice and data services to MDU residents."[3] Although the Commission was dealing only with video service in that Order, its analysis is equally if not more valid when applied to broadband service. More specifically, the benefits of bulk service accrue to consumers, service providers and MTE owners alike, as follows:

(1) *Consumers* (a) receive services at a monthly rate that is usually at least 50 percent less than what a retail customer would be charged for the same service(s); (b) by virtue of negotiated caps on annual bulk fee escalations, are protected from unanticipated and often excessive rate increases (including the expiration of price promotions that are used to lure individual subscribers to commit to extended subscription terms) imposed by service providers; (c) are relieved from the pressure of making large deposits and the risk of not meeting creditworthiness criteria; (d) are able to receive negotiated service packages that are specifically tailored to the needs, desires and interests of their community; (e) avoid the delays, costs and inconveniences of scheduling service installation and activation appointments for individual subscription services, and (f) enjoy the benefits of contractually enforceable SLAs and technology upgrade commitments.

(2) *Service Providers* (a) are spared the cost and effort of marketing services to each resident, performing credit checks, collecting deposits, managing bad debt and theft of service, and of sending technicians to individual units to accomplish service installations and disconnections; (b)

[3] *2010 Exclusive Service Contracts Order* at para. 9.

are contractually guaranteed a reliable revenue stream over time; and (c) are able to commit limited resources to better service customers, technology upgrades and to pass cost savings along to MTE owners and residents, resulting in productive long-term relationships between MTE owners and service providers.

(3) *MTE Owners* are able to (a) enhance the value of real estate assets by offering current and prospective residents high-quality broadband services which are instantly available at move-in at discounted rates as an amenity; (b) secure the installation and ownership of advanced telecommunications infrastructure (such as fiber-to-the-unit) which becomes part of the real estate asset; (c) negotiate strict and enforceable SLAs and ongoing commitments by bulk service providers to upgrade technology according to evolving industry standards; (d) utilize property-specific integrated networks to connect security cameras, community channels, property-wide WiFi, thermostats, access controls, water and electricity sensors, and to deliver Internet service to exercise rooms, clubhouses, elevators and other common areas; and (e) offer cost-free plug-and-play broadcast television programming to residents by means of a master antenna system.

All of these benefits will immediately be lost if bulk billing arrangements are declared unlawful or otherwise become impossible to implement.

B. A prohibition on exclusive wiring-usage agreements is tantamount to a prohibition on Bulk Arrangements.

Proponents of access reform in this proceeding seem to studiously avoid any detailed discussion of the relationship between exclusive wiring agreements and Bulk Arrangements. In these Comments, the phrase "exclusive wiring agreement" to any contractual arrangement under which the MTE owner owns in-building wiring and grants to the selected service provider the right to uninterrupted use of home run wiring.[4] For example, in its Comments INCOMPAS asserts that although Bulk Arrangements are an

[4] Paragraph 15 of the NOI describes "exclusive wiring arrangements" as arrangements under which "MTE building owners purchase [the] inside wiring and then lease back the idle wiring exclusively to the incumbent cable operator

"imperfect practice" (ignoring all of the benefits enumerated in section III.A of these Comments), such arrangements should be allowed "for residential service only and when [they] are not otherwise used to exclude competitive options."[5] In particular, INCOMPAS is worried that Bulk Arrangements "are regularly paired with other features that undermine overall competitive benefits", such as exclusive wiring agreements. Accordingly, INCOMPAS asks that the Commission prohibit providers from using bulk billing arrangements "as a pretext" to bar competition in other ways. Providers should not be permitted "to pair bulk billing with other anti-competitive arrangements – namely, wiring exclusivity..."

This way of framing the issue misrepresents reality and distorts the issues before the Commission in this proceeding. INCOMPAS's assertion that providers use bulk service proposals as a "pretext" to secure other unrelated anti-competitive contractual commitments, and that Bulk Arrangements are illegitimately "paired" with exclusive wiring clauses – these assertions *assume* that the relationship between Bulk Arrangements and exclusive wiring agreements is external and arbitrary rather than internal and necessary. The assumption is false. It's not that Bulk Arrangements are arbitrarily and illegitimately "paired" with exclusive wiring agreements – it's that *there cannot be a bulk billing arrangement without uninterrupted use of in-building wiring by the bulk service provider.* Eliminate exclusive wiring arrangements (as San Francisco's Police Code Article 52 does[6]), and you thereby eliminate bulk billing arrangements. To understand why this is true, one need only consider how a Bulk Arrangement actually works.

Under a Bulk Arrangement, the MTE owner (or HOA) agrees to pay the service provider a monthly bulk service fee, and in return the service provider agrees to deliver the bulk service(s) to 100 percent of the units at the MTE property. The owner recovers the cost of the bulk service on a *pro rata* basis by means of rent or other fee charged to each resident of the building. If the MTE owner does not pay to the

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..." In fact, most exclusive wiring agreements in cable and broadband access agreements are not in the form of "leases"; therefore, our usage of the term is considerably broader than the NOI's.

[5] Comments of INCOMPAS, GN Docket No. 17-142, at 12.

[6] *See* Petition of Multifamily Broadband Council (MBC) Seeking Preemption of Article 52 of the San Francisco Police Code, MB Docket No. 17-91 (filed Feb. 24, 2017).

service provider the full monthly bulk service fee for all the units at the property, the owner is in breach of the bulk service agreement. Since the MTE owner is legally obligated to pay the bulk service fee based on 100 percent of the units, the owner *must* be able to recover a pro-rata portion of its costs from each and every unit at the property. If the owner cannot be certain of its ability to recover the cost of the bulk service from residents, the bulk service arrangement makes no economic sense. Without the ability to grant exclusive use of existing wiring to the bulk service provider, the MTE owner cannot be certain of its ability to recover the cost of the bulk service from all residents. Here is a simple example to illustrate what will happen to Bulk Arrangements if an MTE owner cannot promise uninterrupted use of wiring to the bulk service provider.

> Example 1: Suppose you own a 300-unit apartment building (including the in-building wiring) in the City of San Francisco, where Police Code Article 52 makes exclusive wiring-usage agreements unlawful. Service Provider X offers bulk cable television and Internet services at a per-unit rate that is more than 50 percent less than the rate charged to residents of single-family homes for the same services. Since your residents are not high-income, part of the value of your apartment building consists in your ability to offer actual and prospective residents the benefit of discounted bulk services. However, you also know that under Article 52, if at any time at least one resident (residing in "Unit A") requests the cable or Internet service of alternative Service Provider Y, then you must make the existing home run wiring serving Unit A available for use by Service Provider Y. You can also anticipate that the occupant of Unit A, who, pursuant to Article 52, has requested the services of Service Provider Y, may well refuse to pay that portion of his or her rent representing Unit A's share of Service Provider X's overall monthly bulk service fee. When (not if) that happens, you will be stuck with the contractual obligation to continue to pay to Service Provider X the full bulk service fee on 100 percent of the units in the building, even though you will not able to recover the cost of providing the bulk services to Unit A. It follows that if you are a rational human being, you will *not* sign a bulk service agreement with Service Provider X, because your inability to convey to Service Provider X the exclusive right to use existing wiring means that you cannot count on recovering the cost of bulk service from residents. (By the same token, Service Provider X will not agree to even offer to provide bulk services at your building, because the entire purpose of a bulk billing arrangement is to secure a guaranteed revenue stream over time by agreeing to deliver the bulk service to every unit at an MTE. However, a legal regime such as San Francisco's Article 52 does not provide sufficient stability for Service Provider X to make the assumptions required for a bulk service commitment.)

As Example 1 shows, it is impossible to envision a legal regime that prohibits exclusive wiring agreements without also *in effect* prohibiting Arrangements. But if Bulk Arrangements

become unfeasible, what will happen to those MTE residents who depend on them? Many multi-tenant buildings that depend on the availability of bulk billing arrangement include communities comprised of people who cannot afford to purchase broadband services at their regular retail rates – namely, government-assisted housing, senior living facilities and student housing. In other words, *those consumers who have the greatest, most compelling need for affordable cable and broadband services are the same consumers who are at greatest risk of being deprived of affordable services under the access reform regime contemplated in the NOI and implemented by way of San Francisco's Article 52.*

C. A prohibition on exclusive wiring-usage agreements will result in a degradation of the quality of broadband services and slow the deployment of advanced broadband networks.

Regarding the relationship between exclusive wiring agreements and quality-of-service ("QoS"), INCOMPAS states: "Though some landlords and service providers argue that exclusive wiring arrangements somehow tied to providers' ability to provide high-quality service, this is a false nexus and the Commission should reject these arguments. There is no legitimate reason why good service presupposes exclusive wiring – for instance, one of our members, Google Fiber, has the highest consumer satisfaction in the market."[7]

It is quite obvious that the shared use of inside wiring leads to QoS problems, and there is a wealth of real-world experience to confirm this nexus, if only because multiple signals from multiple service providers carried over a single wire tend to interfere with each other. The real question is not how might the shared use of wiring create QoS problems, but how could it not?

Once again, a few simple examples illustrate the point.

> Example 2: Assume that Service Provider X delivers video and data services to Unit A *via* wiring owned by the MTE owner. The occupant of Unit A, relying on San Francisco's Article 52, wishes to retain Service Provider X's video service, but requests Service Provider Y's Internet service. Under Article 52, the MTE owner must allow Service Provider Y to satisfy Unit A's request for Internet service, and must permit Service Provider Y to utilize the home run wire serving Unit A. Service Provider Y

[7] Comments of INCOMPAS at p. 15.

> installs its signal distribution system at the property and connects the system to the home run wiring serving Unit A for the purpose of delivering Internet access service. First of all, it is clear that in order to avoid signal interference, Service Provider X's video service must use a different frequency band than does Service Provider Y's Internet service. In fact, there must be a clear frequency band demarcation including a buffer zone between the two bands in order for either Service Provider X's video or Service Provider Y's data service to function at all. But many systems even today do not possess sufficient bandwidth capacity to carry the signals of multiple service providers on separate frequency bands. This is why the FCC itself has considered and rejected a proposal to mandate the shared use of home run cable wiring. All the way back in 1997, in the course of its Inside Wiring proceeding, DIRECTV requested that the Commission establish a "virtual" demarcation point from which an alternative provider could share wiring simultaneously with the incumbent cable operator.[8] While acknowledging that the concept deserved further exploration, the Commission declined to grant DIRECTV's request, due to the existence of multiple technical problems surrounding its implementation.

Now let's assume that the home run cable serving Unit A does in fact possess sufficient capacity to carry both Service Provider X's video signal and Service Provider Y's data signal. The QoS issue is not necessarily solved, as illustrated by Example 3.

> Example 3: Suppose that the occupant of Unit A experiences interruptions of either or both video and Internet service. Whom does the occupant call – Service Provider X, Service Provider Y or the landlord? It's easy to imagine the response of both providers to the customer's call – namely, to deny responsibility for fixing the problem, for the simple reason that it's next to impossible to determine the cause of the service interruption, and if the cause is related to signal interference, Service Provider X will blame Service Provider Y and vice-versa.

Example 3 illustrates what will happen to SLAs if service providers are deprived of the right and ability to use in-building wiring without interference. To the extent that service providers are required by law to share home run wiring with competing providers, no provider will accept legal responsibility for fixing customer service problems relating to wiring. In practical terms, mandated wire-sharing will result in the disappearance of SLA commitments in MTE properties.

Example 3 also begins to outline the kind of chaos that is certain to result from mandated wire-sharing. To further delineate this issue, consider Example 4:

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[8] *In the Matter of: Telecommunications Services Inside Wiring*, CS Docket No. 95-184, MM Docket No. 92-260, Report and Order and Second Further Notice of Proposed Rulemaking (rel. Oct. 17, 1997), at para. 270.

> Example 4: Assume that Unit A wishes to terminate Service Provider X's cable television and Internet service and switch to Service Provider Y. Service Provider Y sends its technician to the MTE to accomplish the switch-over. The technician enters the telecom closet or other IDF location and finds a locked box where home run wires are connected to Service Provider X's system. Because San Francisco's Article 52 gives Service Provider Y the legal right to access and use the home run cable, the technician pries open the lockbox disconnects the wire serving Unit A from Service Provider X's system and re-routes it to Service Provider Y's system. (Or, if the wiring serving Unit A is fiber optic cable terminating at a smart panel in the closet of Unit A, Service Provider Y's technician might open the smart panel in order to get at the in-unit wiring.) But the lockbox is the personal property of Service Provider X (as is the smart panel in the fiber installation). Service Provider X accuses Service Provider Y of vandalism and Service Provider Y insists that its technician is only exercising Service Provider Y's legal right under Article 52. Who is right? What is the MTE owner's role in this kind of dispute? Who settles it?

Example 4 illustrates the chaos that will ensue if every service provider has a legal right of access to inside wiring and related facilities that are being used by another service provider. (Since INCOMPAS points to Google Fiber as a sterling example of a company that achieves high customer satisfaction ratings without exclusive access to wiring, it is worth pointing out that under the standard Google Fiber access agreement, Google Fiber owns the fiber it installs in a MTE building. There is nothing in the standard agreement to suggest that any other service provider has the right to use Google Fiber's fiber cable, and it is reasonable to assume that Google Fiber would strenuously object if a second provider even attempted to use that fiber. Thus, contrary to INCOMPAS's assertions, the example of Google Fiber provides no support for INCOMPAS's argument.)

If this isn't enough, further effects on QoS are not difficult to imagine. For example, Elauwit typically installs a wireless access point within each unit receiving bulk service, located at the point where the home run wire terminates. The in-unit access points are used to connect various "smart building" devices and systems into a single property-wide broadband network with multiple functions beyond the provision data and video services, including smart thermostats, access controls, security cameras and sensor networks that detect and monitor water and electricity flows. The key point is that the in-unit access point serves residents other than the occupant of the unit; part of its value consists in its belonging to a property-wide network. Therefore, the value of having a wireless access point in any particular unit

exceeds the value of the services it provides to that particular unit, because the access point in each unit benefits the occupants of every other unit in the building. If a second service provider has a legal right to access and utilize the home run wire serving any unit, and that right is exercised, Elauwit must remove the wireless access point located in that unit. This has two costs: First, removal of any single access point reduces the efficiency of the building-wide network, and to that extent diminishes the value of the network for each resident of the MTE. Second, there are actual costs associated with removal of the access point. For example, removal of the access point requires that Elauwit send a technician to the unit for the purpose of disconnecting and removing the device that is attached to the wire. And if the second provider's service is later terminated, Elauwit will once again have to send a technician back to the unit to re-connect the wireless access point. All of these costs associated with disconnecting and re-connecting interconnected devices will have to be factored into the budget used to calculate the bulk service fee for the MTE, resulting in an incremental increase in the amount paid by each resident for services.

Finally, before leaving the topic of inside wiring, we will at least mention a further issue that is not addressed in the Comments to date – retransmission consent and bulk video content licensing fees. The Commission's rules at 47 C.F.R. § 76.64 (e) create an exemption from the consent requirement for broadcast signals received by master antenna television facilities, "provided that the multichannel video program distributor makes reception of signals available without charge and at the subscribers option and provided further that the antenna facility used for the reception of such signals is either owned by the subscriber or the building owner ...[9] As described above, Elauwit's typical bulk service installation includes a rooftop antenna connected to coaxial wiring allowing off-air broadcast programming signals to be delivered to each unit at the MTE at no charge to the MTE occupant. Thus, Elauwit's master antenna (MATV) system qualifies for exemption from retransmission consent under 47 C.F.R. § 76.64 (e), and provides a significant benefit to MTE owners who can promise free plug-and-play broadcast television programming *via* the MATV system as an amenity. What happens, however, if the wiring used to

[9] 47 C.F.R. 76.64 (e).

distribute the broadcast signal is appropriated by a provider of Internet access services? When the second provider appropriates the wire, the unit in question will no longer be able to receive free off-air television programming by means of the MATV system. The mere possibility of this occurrence would prevent a MTE owner from offering free broadcast television by means of a MATV system as an amenity. But potentially more alarming, would television broadcasters see the collapse of MATV systems in MTEs as an opening for claiming retransmission consent fees from the MTE owner? We do not purport to provide an answer here, only to outline the kind of unanticipated issues that could arise if service providers are given equal access to in-building wiring as proposed in the NOI.

The point of the foregoing examples is to show that a regulatory regime in which every service provider has a legal right to use existing in-building wiring, resulting in mandatory wire-sharing, is certain to exacerbate existing QoS problems in MTEs, and to create new QoS problems that are difficult to foresee. And QoS problems amount to lower quality service for consumers.

D. The Commission should not impose a Federal mandatory access law on MTEs.

In support of its argument that wiring exclusivity clauses have no effect on a broadband provider's incentive to invest in an MTE, INCOMPAS quotes paragraph 28 of the FCC's *2007 Exclusive Service Contracts Order*: "... there is no evidence in the record, other than generalities and anecdotes, that incumbent MVPD providers couple exclusivity clauses with significant new investments ..."[10] But in paragraph 28 of *2007 Exclusive Service Contracts Order*, the phrase "exclusivity clauses" refers to *exclusive building access clauses* that bar a second provider from the MTE property altogether. The phrase does *not* refer to clauses that grant exclusive access to existing inside wiring but not the entire property. In fact, ever since the Commission banned exclusive access agreements for video services in

[10] *Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments*, MB Docket No. 07-51, Report and Order and Further Notice of Proposed Rulemaking, 07-189 (*2007 Exclusive Service Contracts Order).*

2007, it has become common practice for multiple service providers to operate in a single MTE property, each using separate infrastructure.

INCOMPAS's misleading reference makes a difference because, in that same paragraph 28, the *2007 Exclusive Contracts Order* goes on to say this (emphasis added): "Finally, other agreements between incumbent MVPDs and MDU owners, perhaps providing for marketing exclusivity or *bulk discounts*, can provide benefits similar to those alleged for exclusivity clauses without causing the latter clauses' entry-foreclosing harms to consumers." The Commission's point was that even if exclusive access agreements are banned (as they were a decade ago), providers may rely on other types of agreements – such as bulk billing arrangements – to ensure recovery of the provider's or an MTE owner's investment in wiring a MTE building. But the entire thrust of INCOMPAS's comments is to attack precisely the "other agreements" endorsed by the Commission in 2007 as ameliorating the investment-deterring effect of its ban on exclusive access.

In the *2007 Exclusive Contracts Order*, the Commission was careful to point out that the ban on exclusive access agreements does *not* amount to a Federal mandatory access law that would force property owners to allow access to MTE buildings without the need for the service provider to negotiate the terms of access in an agreement. For example, paragraph 28 of the *2007 Order* (cited by INCOMPAS) includes footnote 92, which says: "Nothing herein … imposes a duty or rule on a MDU owner to allow multiple MVPD providers within its premises."[11] But the explicit purpose of San Francisco's Article 52 and of the reforms urged by INCOMPAS is *exactly* to "impose a duty or rule on a MDU owner to allow multiple MVPD providers within its premises" – in part, by allowing multiple broadband providers to access existing inside wiring[12].

Imposing a rule on MTE owners that grants to all service providers a legal right of access, including the right to use existing wiring, is tantamount to eliminating the transaction that is negotiated between the

[11] "… the rule we adopt today does not require that any new entrant be given access to any MDU." *2007 Exclusive Service Contract Order*, para. 37.
[12] "Article 52 requires building owners to provide access to all communications providers who qualify under the law." INCOMPAS Comments, pp. 21-22.

provider and the property owner concerning terms and conditions of access. INCOMPAS envisions a model in which the MTE owner is effectively eliminated from the equation, and the *only* transaction that matters is the subscription agreement between the service provider and the MTE resident, exactly as it occurs with regard to single-family homes[13]. Ignored in this analysis (apart from legal rights associated with the concept of private property) is the fact that building out a broadband network to reach a customer in an MTE is considerably more complex, and much more expensive, than extending a network from the street into an adjacent single-family home.

Installing an advanced broadband network in a MTE property costs money, and someone has to pay for it. Elauwit believes that the best, most economically and socially efficient model for providing broadband services in a MTE building is the bulk model. The bulk model allows the MTE owner to participate in the delivery of cutting-edge broadband services to consumers at discounted prices, while at the same time increasing the attractiveness of the MTE property to current and prospective residents. Bulk arrangements encourage investment by the MTE owner in critical in-building infrastructure such as fiber optics and Cat5e (or better) wiring, and reduces encumbrances on title that allow entrenched service providers to interfere in the real estate market for often anti-competitive purposes – and all of this without legally blocking competitive entry by third party service providers. The bulk model is the only model that *both* encourages MTE owners to own, control and invest in advanced communications infrastructure *and* provides the economic stability that service providers require in order to deliver innovative and convenient high-quality services at affordable prices for every consumer whom resides in the multi-tenant property, including those living on fixed income.

If the negotiated building access transaction including Bulk Agreements between service provider and MTE owner is eliminated, thus erasing the owner's participatory role in delivering services to MTE residents, the result will be that service providers will insist on owning and controlling all of the

[13] It is worth noting here that the subscription agreement between a cable or telco carrier and the individual subscriber is never "negotiated"; on the contrary, it is an adhesion contract that is regulated by the FCC and the Federal Trade Commission to ensure minimal fairness.

broadband infrastructure they use in order to protect it from use or disruption by a competing provider under regulatory regimes like San Francisco's Article 52.[14] This is exactly the circumstance that led to the MTE-related reforms included in the Telecommunications Act of 1996, including the FCC's Inside Wiring Rules[15]. In other words, by promulgating a Federal mandatory access rule, the Commission would be taking a step back into the historical past, a time when MTE buildings were dominated by a few large incumbent carriers that were able to leverage their ownership of in-building infrastructure to secure and maintain monopolies in MTE properties across the country. If regulators decide to turn back the clock of history, it is likely that we will once again see a small number of large incumbent cable and telephone companies divvying up MTE markets, cherry-picking the most lucrative buildings and leaving the rest – consisting of those consumers most in need of the service the pro-consumer benefits provided by bulk billing arrangements – underserved or not served at all.

This hypothesis is based on simple and sound economics. If the regulation eliminates the access deals including Bulk Arrangements negotiated between MTE owners and service providers, then only those service providers with huge capital and operating budgets will remain. Competition in MTEs exists to the extent that competitive service providers exist, and a competitive service provider cannot survive without encouraging MTE owner capital participation and negotiating an access deal with the MTE owner. The typical resident turn-over rate in a student housing unit is greater than 80 percent annually, and in conventional rental communities greater than 50 percent each year. This means that the average length of a resident's stay in a particular MTE housing unit is between 9 and 18 months. A building access model that requires the service provider to absorb the transactional costs of selling and installing service to a specific MTE customer by way of existing wiring, or through installation of new wiring, does not allow the competitive service provider or any service provider to earn adequate return on its investment over the 9- to 18-month service term. The only service providers able to survive in this kind of environment are

[14] Under Article 52, a competitive service provider is given the right to use inside wiring that is owned by the MTE owner, not by the incumbent service provider.
[15] 47 C.F.R. § 76.802 and § 76.804.

those with very deep pockets who benefit from other vertically integrated revenue streams such as advertising, equipment sales, or government subsidies, and those service providers have clearly demonstrable histories of suppressing competition wherever consumer choice threatens their business model.

In short, if the Commission's goal is to preserve and enhance broadband competition in MTEs, market conditions must permit competitive service providers to survive and prosper. Competitive service providers such as Elauwit can *only* prosper if they can negotiate the kind of access deal with MTE owners that allows them to recover their investment in MTE buildings. The best, most socially and economically efficient access model for broadband services in MTEs is the bulk service arrangement, and the Commission must take great care to preserve its viability.

Respectfully submitted,

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